6g
No

North American *flagpoles*

STEEL

straight tapered
entasis tapered
swaged

ALUMINUM

tapered

catalog no. 60

NORTH AMERICAN IRON & STEEL CO., INC.
FIRST AVENUE & 58th ST., BROOKLYN 20, N. Y. PHONE GEdney 9-6247

flagpoles

by naisco

Manufacturers of a full line of flagpoles in steel, aluminum, bronze, stainless steel, and wrought iron. These poles are made in 3 types . . . STRAIGHT TAPERED, ENTASIS TAPERED, SWAGED SECTIONAL, for ground or wall setting.

NAISCO flagpoles are constructed and erected in accordance with the specifications of the U.S. Government, and other jurisdictional bodies. Complete installation information, with blueprints, accompany each shipment.

straight taper

Fabricated without visible joints, seams, or offsets. The upper portion of these flagpoles is tapered.

entasis taper

Pole differs from the straight taper in that the pole is tapered with the classic curve tapering, instead of the straight line taper. The fabrication of this type pole is somewhat more complicated than the straight tapered, and is therefore more costly. The result is a monumental, classic effect, ideally suited to buildings in the classic tradition.

swaged sectional

Pole consists of a series of telescoping sections of seamless steel tube. Each section is swaged and shrunk to the next and the joints are welded airtight and watertight.

fittings

Balls—Made of 20 oz. copper of any desired diameter, painted and sized and covered with 23 kt. gold leaf. They are mounted on galvanized rods. Special ornaments, eagles, weather vanes, etc. are available.

Trucks—of two types—the heavy type is 8 in. in diameter. The body and king pin are galvanized. The pins are bronze. Bearings are manganese bronze. The smaller type is 7″ diameter and used for poles 25′ and less.

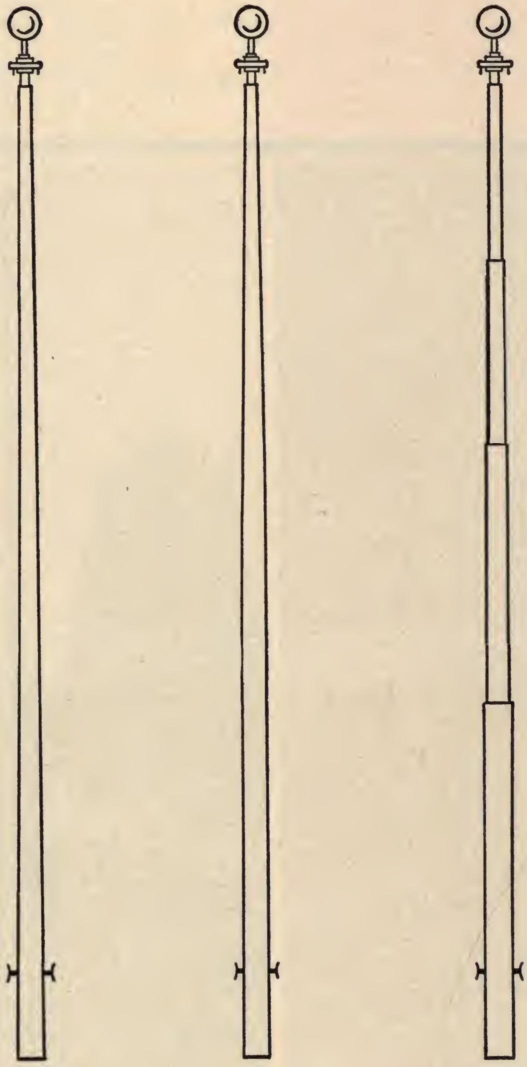
Cleats—Galvanized; generally 9 in. long but may be obtained from 4 to 18 in. long, to suit special conditions.

Halyards—Of best grade Manila fibre, conforming to U.S. standards, generally 3/8 in. in diameter, but any other size can be furnished.

Snap Hooks—Of the heavy swivel type, chrome plated brass.

Note: All of the above mentioned galvanized materials may be obtained in solid bronze or aluminum.

basic types



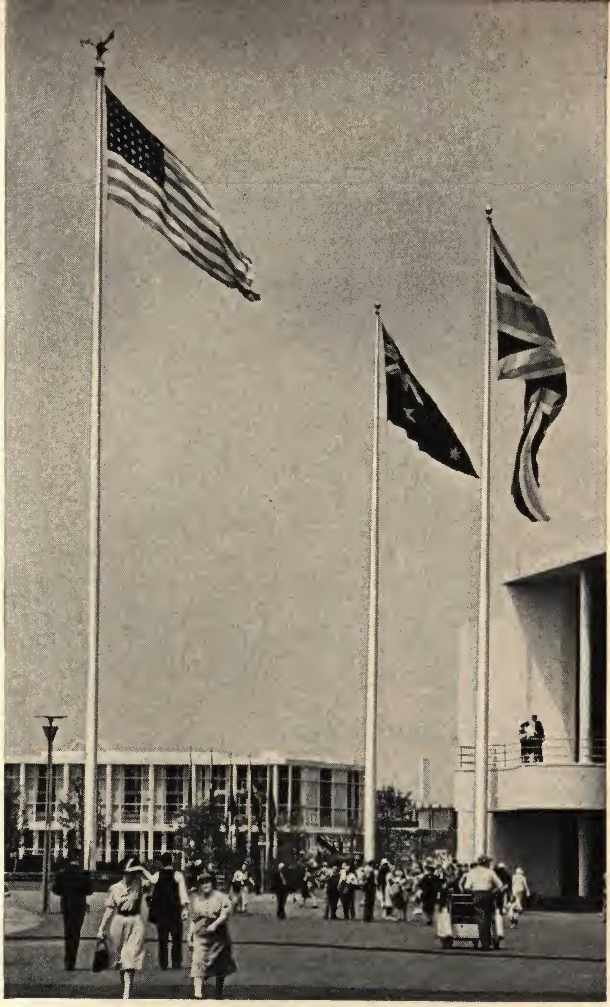
straight tapered

entasis tapered

swaged sectional

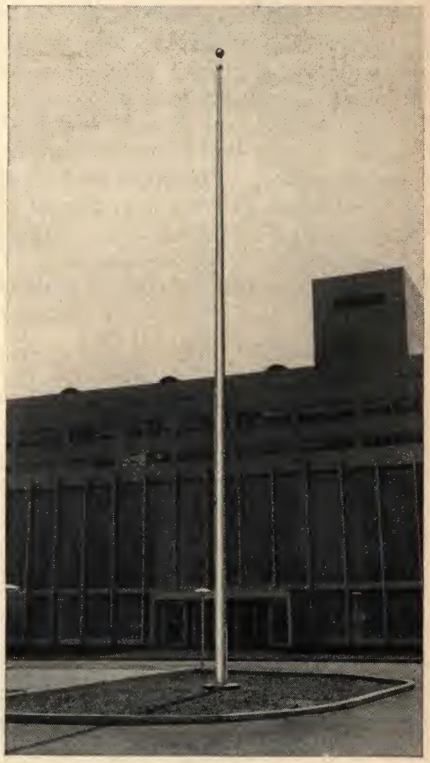
specifications listed on pages 4, 5 and 6

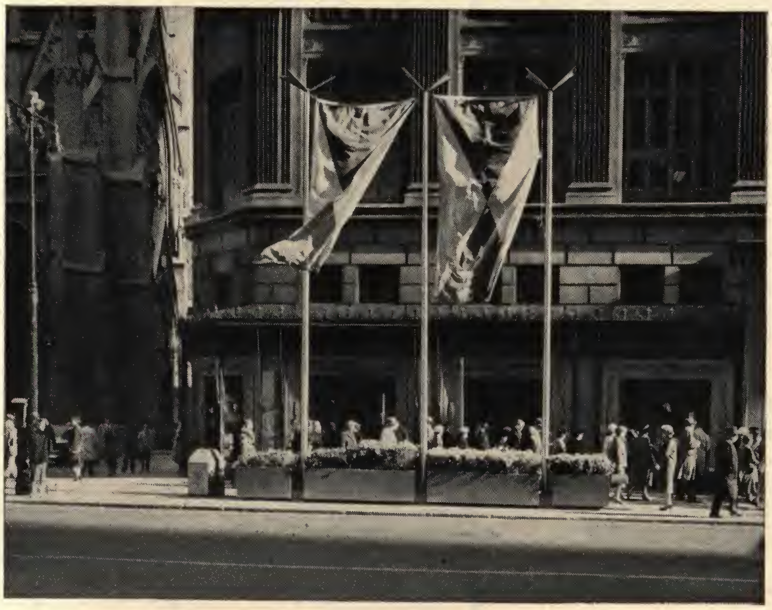
flagpoles *by naisco*



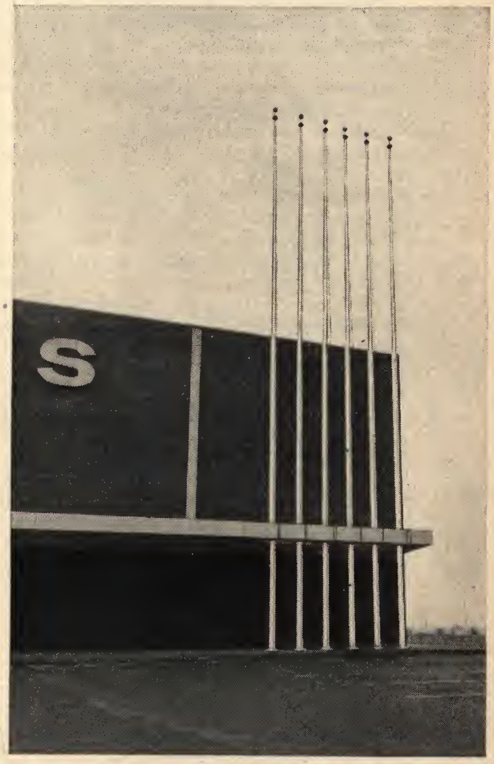
100′ flagpoles
New York World's
Fair 1939

60-foot aluminum
flagpole
New York University
Bellevue Medical
Center, New York.
N. Y.
Skidmore Owings &
Merrill, Architects





3 of 90 aluminum poles furnished
at Fifth Avenue as part of New York City's
"Salute to the Seasons".



Gimbels, Valley Stream, New York
Dyker Building Co., General Contractors
Irwin Chanin, N. Y. C., Architect.

STEEL FLAGPOLES

STRAIGHT TAPERED

North American STRAIGHT TAPERED steel flagpoles are sturdy and attractive. They are tapered in a smooth, uninterrupted manner without offsets or visible joints. The lower portion of each pole is fabricated of seamless standard weight steel pipe of wall thickness varying from ¼″ to ½″ as the diameter changes with the height flagpole chosen. The upper portion of the flagpole is tapered uniformly with a standard taper of 1″ in 7.14′ of height. The tapered section has a wall thickness of ¼″. Poles over 34′ in length are generally shipped in 2 sections with provisions made for field splicing in a quick and neat manner.

specifications

a—Furnish and erect where indicated on plans a straight tapered steel flagpole as manufactured by the North American Iron & Steel Co., Inc. of Brooklyn 20, N. Y. Material used for the mast and fitting is to be new and full weight. If requested by the Architect the manufacturer is to furnish mill certificates covering the pipe and tubing used.

b—The Flagpole is to be set in the concrete foundation as shown in the detail.

c—The exposed height of the flagpole is to be ________ with the overall height to be ________. The pole is to be the (standard) (extra heavy) type with a butt diameter of ________ inches and a top diameter of ________ inches.

d—The lower portion of the flagpole is to be of standard weight seamless steel pipe of diameter indicated. The upper portion of the pole is to be straight tapered with a uniform taper of 1″ in 7.14′. The minimum wall thickness of the tapered section is to be ¼″. The pole surface shall be smooth without offsets or visible joints. If, due to shipping restrictions, the pole is shipped in more than one section, provision for field splicing is to be made. An internal sleeve is to be provided so that no bolts need be used in making a neat and secure field welded splice.

e—Provide a foundation tube of 12 gauge steel of diameter and length shown in detail. Foundation tube is to be provided with base plate, lightning spike, welded centering wedges at the lower end and either centering bolts or loose wedges at the top for plumbing the pole after erection.

f—Where no ornamental base is used an 18″ ground protector is to be provided with a minimum thickness of ¼″. The ground protector is to extend 12″ above grade and is to be welded to pole.

g—The flagpole is to be furnished with a ball of ________″ diameter. The ball is to be of 20 oz. copper covered with 23 karat gold leaf over 3 coats of waterproof paint.

h—The flagpole truck is to have a (bronze) (cast iron) body revolving on a bronze spindle with a bearing containing ¼″ stainless steel balls. The truck is to be non fouling and is to be equipped with two 4″ bronze sheaves mounted on monel metal shafts.

i—Furnish two 9″ (cast iron) (bronze) cleats at convenient height. Cleats shall be bolted to pole with 5/16″ galvanized steel bolts for cast iron cleats and brass bolts for bronze cleats.

j—Provide two sets of ⅜″ standard manila rope halyards each with two brass swivel snaps for flag attachment.

k—Exposed portions of flagpole and the sleeve are to be given a shop coat of red metallic primer. The flagpole is to be painted with 2 field coats of marine white lead and oil. NOTE: The foundation detail on page 5 indicates a flash collar. An ornamental base may be substituted from the bases shown on page 7. Please specify base by number after checking to be sure that the base is suitable for the butt diameter required.

In addition to the fittings specified flagpoles can be furnished with one or two cleat covers, eagle in combination with the ball (specify wingspan) or eagle and arrow weathervanes.

If desired, cotton braided, nylon or bronze core halyards can be furnished instead of manila rope.

ENTASIS TAPERED

North American ENTASIS TAPERED Steel flagpoles differ from the straight tapered pole in that the tapering takes the classical curved form rather than the uniformly tapered shape. In contrast to the machine made straight tapered pole the entasis tapered pole is custom fabricated by hand. It is generally accepted that the lower third of the exposed height of the pole is straight from which point the pole is gracefully tapered in a curved manner for the upper two thirds of height. The entasis pole is the most costly of the three types fabricated but is often chosen for the monumental appearance.

specifications

The specifications listed for the straight tapered pole can be used with the following substitutions:

Paragraph (a) Substitute: — Furnish and erect where indicated on plans an entasis tapered steel flagpole. Material used for the mast and fittings is to be full weight and new. If requested by the Architect the manufacturer is to furnish mill certificates covering the steel pipe used.

Paragraph (e) Substitute the word "entasis" for "(standard) (heavy)."

Paragraph (d) Substitute: — Pipe used is to be standard weight seamless steel. The lower third of the exposed height of the pole is to be cylindrical in the entasis manner and finished in proper manner so that the finished surface of the pole is smooth and without offsets. If due to shipping restrictions, the pole is shipped in more than one section provision for field splicing is to be made. An internal sleeve is to be provided so that no bolts need be used in making a neat and secure field welded splice.

The remainder of the specifications and notes indicated for the straight tapered poles are applicable.

The foundation detail and dimensions indicated on page 5 are applicable.

dimensions

	straight tapered, standard						straight tapered, extra heavy					
exposed height, ft.	overall height, ft.	length of tapered section, ft.	butt diam., in.	top diam., in.	ball diam., in.	approx. weight, lbs.	overall height, ft.	length of tapered section, ft.	butt diam., in.	top diam., in.	ball diam., in.	approx. weight, lbs.
25	27½	12½	5	3¼	5	395	28	16½	5	3¼	5	425
30	33	12½	5	3¼	6	455	33	16½	5 9/16	3¼	6	507
35	38½	16½	5 9/16	3¼	6	578	38½	24	6⅝	3¼	6	675
40	44	16½	5 9/16	3¼	6	660	44	24	6⅝	3¼	6	785
45	49½	24	6⅝	3¼	8	895	49½	37	8⅝	3¼	8	1030
50	55	24	6⅝	3¼	8	1005	55	38½	8⅝	3¼	8	1114
60	66	31¼	7⅝	3¼	8	1378	66	53½	10¾	3¼	8	1574
70	77	38½	8⅝	3¼	10	1638	77	60½	11¾	3¼	10	2051
80	88	53½	10¾	3¼	12	2039	88	67¾	12¾	3¼	12	2498
90	99	60½	11¾	3¼	14	2970	99	78¼	15	4	14	4050
100	110	66	12¾	3¼	14	3720	110	85¾	16	4	14	4890

dimensions

	entasis tapered					
exposed height, ft.	overall height, ft.	length of tapered section, ft.	butt diam., in.	top diam., in.	ball diam., in.	approx. weight, lbs.
25	27½	8	5	2⅞	6	380
30	33	10	5 9/16	2⅞	6	498
35	38½	12	6⅝	3½	6	716
40	44	13	7⅝	3½	8	960
45	49½	15	8⅝	3½	8	1212
50	55	17	9⅝	3½	8	1661
60	66	20	10¾	3½	8	1950
70	77	23	11¾	4	10	2612
80	88	27	12¾	4	12	4200
90	99	30	15	4	12	4932
100	110	33	16	4	14	5870

SWAGED SECTIONAL

North American SWAGED SECTIONAL steel flagpoles are fabricated of steel pipe in consecutive diameters to the top of the pole. The consecutive sizes are "telescoped", hydraulically hot swaged and welded. The joints are airtight and weathertight. Due to the close fit of the shop prepared field joint no field welding is necessary in field jointing. The pipe used is standard weight seamless and guaranteed new. The swaged pole is the least expensive of the three varieties serving the basic purpose at least cost. The full line of bases indicated on page 7 is available for the swaged steel flagpoles.

specifications

The specifications listed for the straight tapered pole can be used with the following substitutions:

Paragraph (a)	Substitute: — Furnish and erect where indicated on plans a swaged steel flagpole. Material used for the mast and fittings is to be full weight and new. If requested by the architect the manufacturer is to furnish mill certificates covering the steel pipe used.
Paragraph (c)	Substitute the word "swaged" for (standard) (heavy).
Paragraph (d)	Substitute:—Pipe used is to be standard weight seamless steel. The pole is to be fabricated of consecutive diameters of pipe using the butt diameter indicated. The joints are to be hydraulically hot swaged where required for complete contact between outer diameter of the smaller size. All joints are to be welded to provide airtight and weathertight joints. If, due to shipping requirements, the pole is shipped in more than one section provision for field splicing is to be made. An internal sleeve is to be provided so that field welding will not be required.

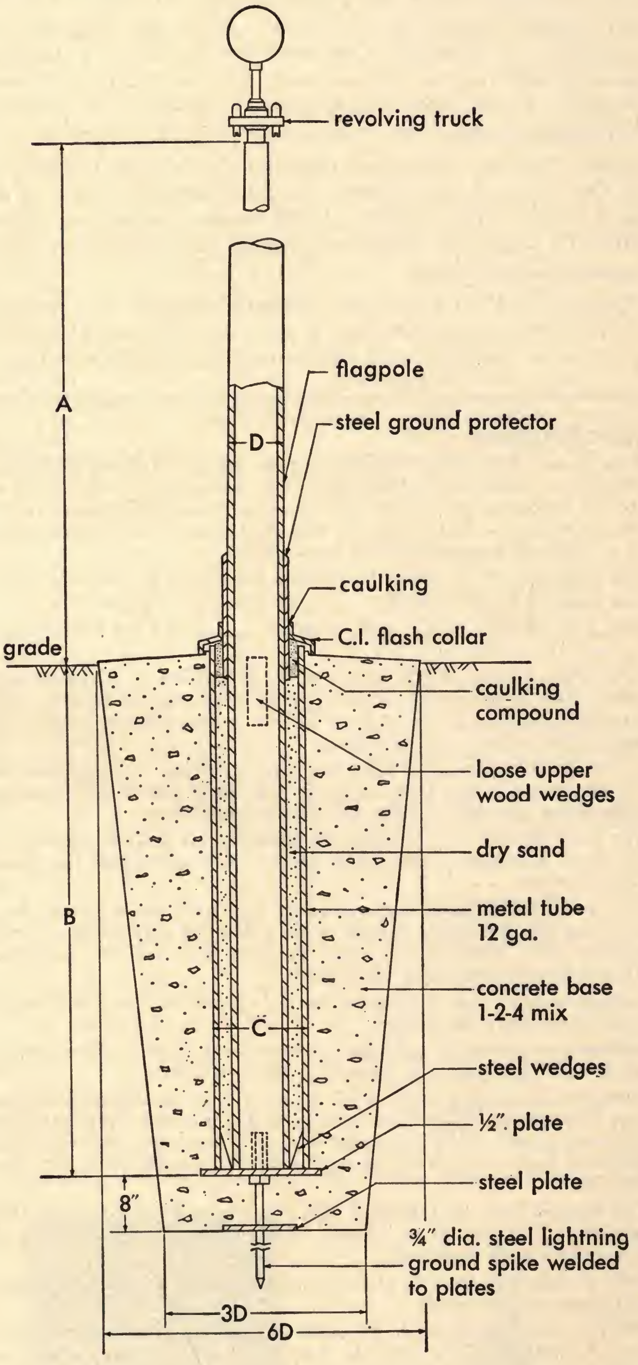
The remainder of the specifications and notes indicated for the straight tapered pole are applicable.

dimensions

swaged sectional

exposed height, ft.	overall height, ft.	butt diam., in.	top diam., in.	ball diam., in.	approx. weight, lbs.	no. of knocked down sections (subj. to change)
25	28	4½	2⅞	5	314	2
30	33	5	2⅞	6	405	2
35	38½	5 9/16	2⅞	6	520	2
40	44	5 9/16	2⅞	6	593	3
45	49½	6⅝	2⅞	6	702	3
50	55	6⅝	2⅞	8	800	3
60	66	7⅝	2⅞	8	1200	4
70	77	8⅝	2⅞	8	1600	4
80	88	10¾	2⅞	10	2410	5
90	99	11¾	2⅞	10	2840	6
100	110	12¾	2⅞	12	3600	6
125	137½	14	2⅞	14	5414	7

typical detail



A—Exposed height, feet.

B—Height below grade. 10% of "A", minimum 3'-0". (See dimensions)

C—Foundation tube diameter. "D" + 3".

D—Butt diameter, inches. Refer to tables at left.

E—Top diameter, inches. Refer to tables at left.

F—Ball diameter, inches. Refer to tables at left.

ALUMINUM FLAGPOLES

STRAIGHT TAPERED

North American STRAIGHT TAPERED ALUMINUM flagpoles have greatly increased in sales. The elimination of maintenance requirements have proved the greater initial cost worth while. Using greater butt diameters than steel—because of the lesser strength value—we can recommend aluminum for use for exposed heights up to 70 feet. Aluminum flagpoles are fabricated of seamless aluminum tubing and are machine brushed satin finished, then waxed. The painting of aluminum flagpoles is not recommended since it negates the principal advantage of aluminum by requiring periodic repainting.

North American aluminum flagpoles are cylindrically shaped at the butt and then tapered at a uniform dimension of 1″ in 5.5 feet. The material is .188 inches in thickness and is 6063-T6 aluminum alloy, heat treated and annealed to eliminate all internal strain.

Poles over 34′ in length are generally shipped in 2 sections. A field splice is provided that is self aligning, close fitting and provides a "hairline" joint when complete, without welding.

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specifications

Furnish and erect where indicated in plans Straight Tapered Aluminum Flagpole as manufactured by the North American Iron & Steel Co., Inc. of Brooklyn, N. Y. The pole is to be fabricated of seamless aluminum tubing with a minimum wall thickness of .188 inches and is to be 6063-T6 aluminum alloy, heat treated.

The flagpole is to be set in the concrete foundation as shown in detail. The exposed height is to be ______ with the overall height to be ______.

The butt diameter of the pole is to be ______ and the top diameter ______.

The lower portion of the pole is to be cylindrical of diameter indicated. The upper portion of the pole is to be straight tapered using a uniform taper of 1″ in 5.5 feet. Pole is to have smooth exterior surface without offsets or visible joints.

If, due to shipping restrictions, the pole is shipped in more than one section, provision shall be made for field joint that is self aligning, close fitting and neat without field welding or bolting.

The ball shall be ______ inches in diameter. It shall be constructed of 14 ga. aluminum and mounted on a dural rod threaded for attachment to truck.

The truck shall be revolving nonfouling type with cast aluminum body revolving an aluminum spindle with a bearing containing ¼ inch stainless steel balls. Truck shall be fitted with two 4″ aluminum sheaves mounted on monel metal shafts.

Furnish two 9″ cast aluminum cleats fastened at convenient height with 5/16″ aluminum bolts.

Provide two sets of ⅜″ standard manila rope halyards with two brass, chrome plated swivel snap hooks for flag attachment.

Furnish a foundation tube of 12 gauge steel of diameter and length shown in detail. Foundation tube is to be provided with base plate lightning spike, welded centering wedges at the lower end and either centering bolts or loose wedges at the top for plumbing the pole after erection.

The flagpole is to be furnished with a brush satin waxed finish. The portion of the pole to be inserted in the foundation sleeve is to be given one coat of asphaltum.

Prior to shipment the pole shall be spirally wrapped with heavy paper and adequately protected.

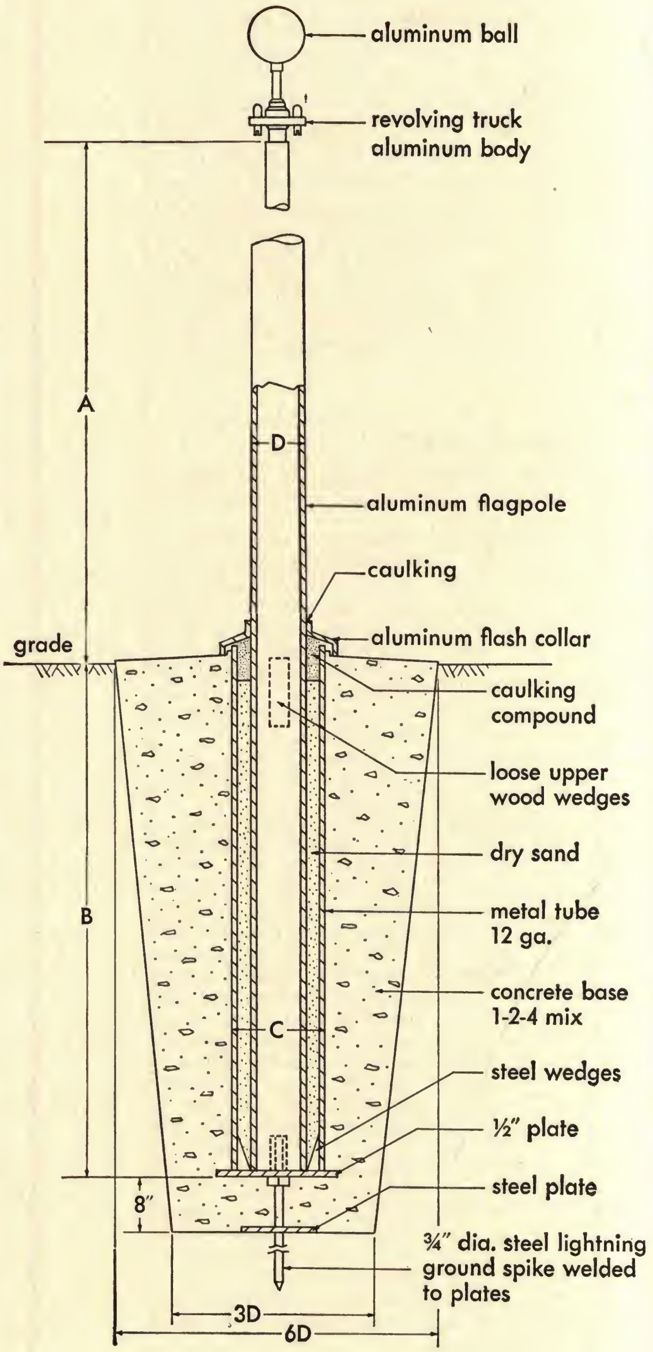
NOTE: The foundation to the right indicates an aluminum flash collar. An ornamental base may be substituted from the bases shown on Page 7. Please specify the base number after checking to be sure that the base is suitable for the butt diameter required.

dimensions

straight tapered

exposed height, ft.	overall height, ft.	length of tapered section, ft.	butt diam., in.	top diam., in.	ball diam., in.	approx. weight, lbs.
20	22	9⅔	5	3¼	6	140
25	27½	11	5½	3½	6	160
30	33	13⅔	6	3½	6	185
35	38½	19¼	7	3½	6	250
40	44	24¾	8	3½	6	300
50	55	33	10	4	8	425
60	66	33½	12	5	8	540

typical detail



A—Exposed height, feet.

B—Height below grade. 10% of "A", minimum 3′-0″. (See dimensions)

C—Foundation tube diameter. "D" + 3″.

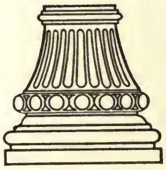
D—Butt diameter, inches. Refer to tables at left.

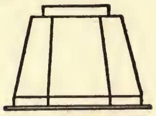
E—Top diameter, inches. Refer to tables at left.

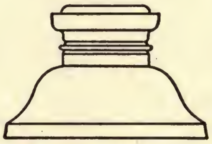
F—Ball diameter, inches. Refer to tables at left.

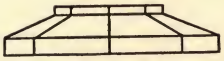
BASES steel, aluminum, stainless steel, bronze

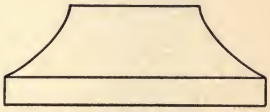
ground setting

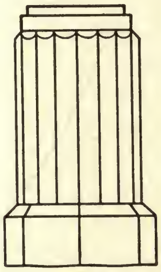

#101
1'-5" diam.; 1'-5" high
butt diam. 5" to 7 5/8"

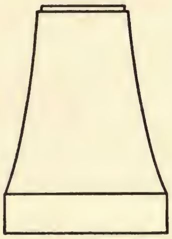

#107
1'-4" diam.; 1'-0" high
butt diam. 3" to 8 5/8"

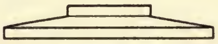

#108
1'-10 1/2" diam.; 1'-1 3/4" high
butt diam. 8 5/8"

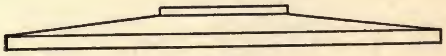

#110 octagon base
1'-7 13/16 diam.; 4 1/8" high
butt diam. 4" to 6 5/8"

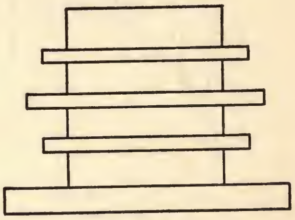

#109
2'-0" diam.; 8 1/2" high
butt diam. 5" to 8 5/8"

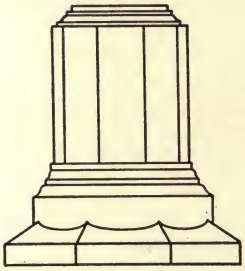

#114
1'-2 1/2" diam.; 2'-0 1/2" high
butt diam. 5 5/16" to 8 5/8"

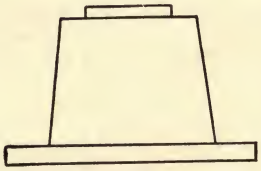

#113
1'-8" diam.; 2'-4" high
butt diam. 5 5/16" to 8 5/8"

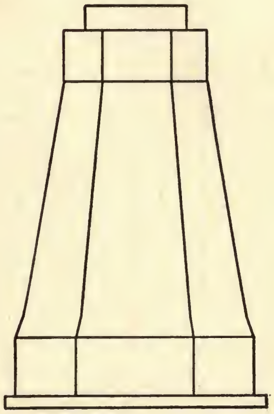

Flash Collar
Size to accommodate pole

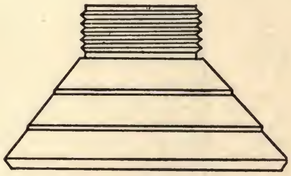

#112
3'-2" diam.; 3 1/2" high
butt diam. 5 1/2" to 12 3/4"


#116
2'-6" diam., 1'-5" high
butt diam. 7 5/8", 8 5/8" or 10 3/4"


#115
2'-10" diam.; 3'-2" high
butt diam. 8 5/8" to 12 3/4"


#111
2'-0" diam.; 1'-2 1/2" high
butt diam. 5" to 8 5/8"

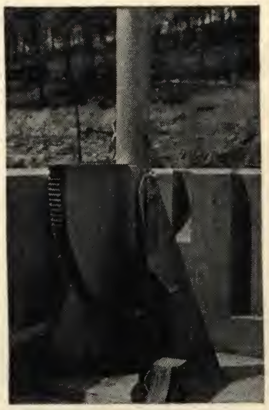

#106
2'-6" diam.; 3'-0" high
butt diam. 5" to 12 3/4"


#117
2'-0" diam., 1'-5" high
butt diam. 10"

Tilting poles

Flagpoles can be made readily accessible using the Naisco carefully engineered worm gear tilting mechanism. Using a removable handle the pole can be tilted 90°. Anchor bolts and layout details for the steel base are provided with each pole of this type.

Aluminum poles can be tilted by means of counterweights. The Naisco design for the counterweight enclosure and channel supports is neat and smoothly efficient.

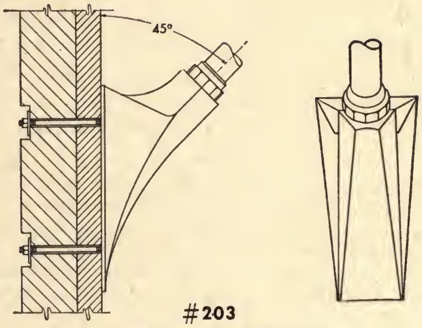

worm gear
tilting mechanism

counterweight tilting
mechanism

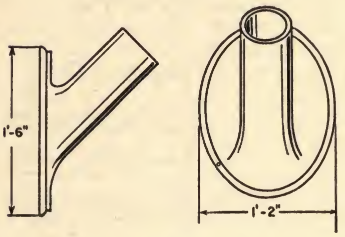
flagpoles *by naisco*

WALL MOUNTED FLAGPOLES steel, aluminum, stainless steel

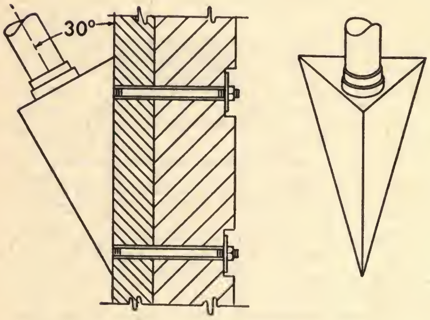
outrigger bases



#203
1'–1" wide; 1'–10¾" high
butt diam. 3½" to 5"

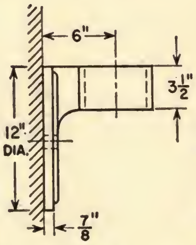


#202
1'–2" wide; 1'–6" high
butt diam. 3½" to 4½"

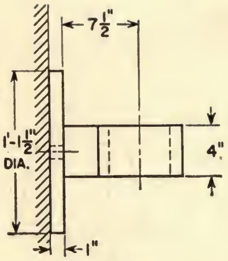


#209
1'-2" wide; 2'-0" high
butt diam. 3½" to 4½"

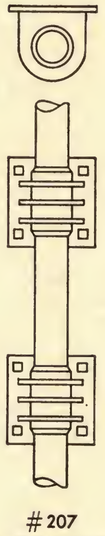
vertical wall mounted



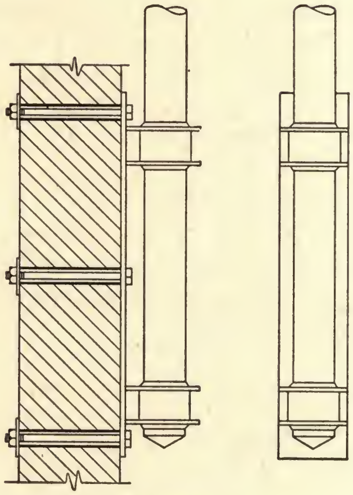
#204
butt diam.
5"



#205
butt diam.
2" to 5"



#207
overall dimensions vary
with pole height
butt diam. 3½" to 6⅝"



#208
overall dimensions vary
with pole height
butt diam. 3½" to 6⅝"

Furnish and erect where shown on plans a straight tapered (steel) (aluminum) (Stainless steel) flagpole for (outrigger) (Vertical) wall mounting, complete with all fittings as made by North American Iron & Steel Co., Inc. Brooklyn, N. Y. Pole to be made of all new seamless stock. Pole to be _____ ft. total length. Butt diameter to be _____ inches. Top diameter to be _____. Pole to be mounted with (Steel) (Aluminum) (Stainless Steel) Naisco base #_____. Pole and Base to be finished with (Steel—1 shop coat red lead, after erection steel shall be painted with 2 finishing coats of outside marine white paint) (Aluminum-Satin Brush Waxed finish) (Stainless Steel—#4 Satin Finish).

OTHER PRODUCTS

We make a specialty of radio masts and ship booms of all kinds as we have had wide experience in this type of work for the United States Navy and other government bureaus. Radio masts vary in design on account of the conditions under which they are to be used. Masts may be of the tapered, swaged sectional, telescopic type, or light structural members of any special design as desired by the engineer. In addition we make all types of lampposts, stanchions, davits, etc. Further information sent on request.

NORTH AMERICAN IRON & STEEL CO., INC.

FIRST AVENUE & 58th ST., BROOKLYN 20, N. Y. PHONE GEdney 9-6247

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